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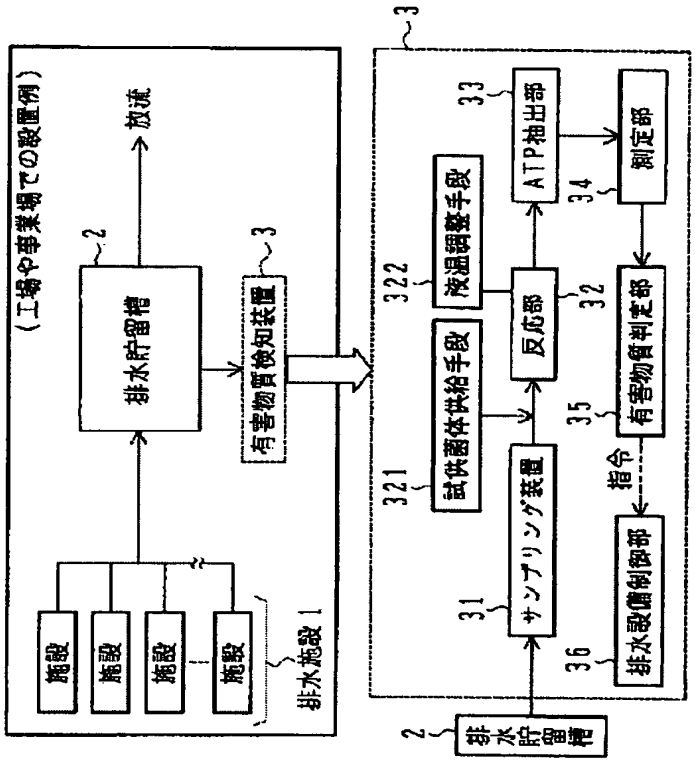
TITLE : METHOD FOR DETECTING HAZARDOUS MATERIAL AND EQUIPMENT FOR THE SAME METHOD



ABSTRACT : PROBLEM TO BE SOLVED: To detect a hazardous material contained in sewage and to previously prevent its outflow outside a system.

SOLUTION: A water sample collected from sewage is fed to a reaction unit 32 and is added with sample bacterial cells. After that, the hazardous material in the sewage is detected from an ATP concentration change within the bacterial cells which is calculated in a hazardous material decision unit 35. The sample bacterial cells belong to Escherichia coli or Salmonella and are added in such a way that the respective bacterial cell concentrations of Escherichia coli and Salmonella in the liquid phase of the reaction unit 32 are about 1×106/mL and about 5×106/mL. The solution temperature of the reaction unit 32 is adjusted in such a way as to be 10-20°C. The unit 35 feeds a control signal based on a judged result whether the hazardous material is present or not into a sewage arrangement control unit 36 to prevent the outflow of the hazardous material outside the system.

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PA - (AGEN) AGENCY OF IND SCI & TECHNOLOGY
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PN - JP53084796 A 19780726 DW197835 000pp
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PR - JP19760159259 19761230
XIC - G01N-033/00
AB - J53084796 Determination of biodegradability comprises aerating an aq. solution of the sample contg. aerobic bacteria, determining the number of aerobic bacteria before and after the aeration, and estimating the ease of biodegradation of the substance by the change in the number of the bacteria.
- Degree of the biodegradability of a substance can be easily and rapidly estimated by simple appts. such as aerating device and thermo-stat. The method is applicable to pure chemical substance(s), exhaust water from factory, etc.
IW - DETERMINE BIODEGRADABLE SUBSTANCE AERATE SOLUTION SUBSTANCE PRESENCE AEROBIC BACTERIA OBSERVE CHANGE BACTERIA POPULATION
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NC - 001
OPD - 1976-12-30
ORD - 1978-07-26
PAW - (AGEN) AGENCY OF IND SCI & TECHNOLOGY
- (KYOD) KYOD YUSHI KK
TI - Determining biodegradability of a substance - by aerating a soln. of substance in presence of aerobic bacteria and observing change in bacteria population